Local

At tainted San Francisco shipyard, is 'safe' site really safe?

By Jason Fagone and Cynthia Dizikes | May 5, 2018 | Updated: May 6, 2018 12:28pm

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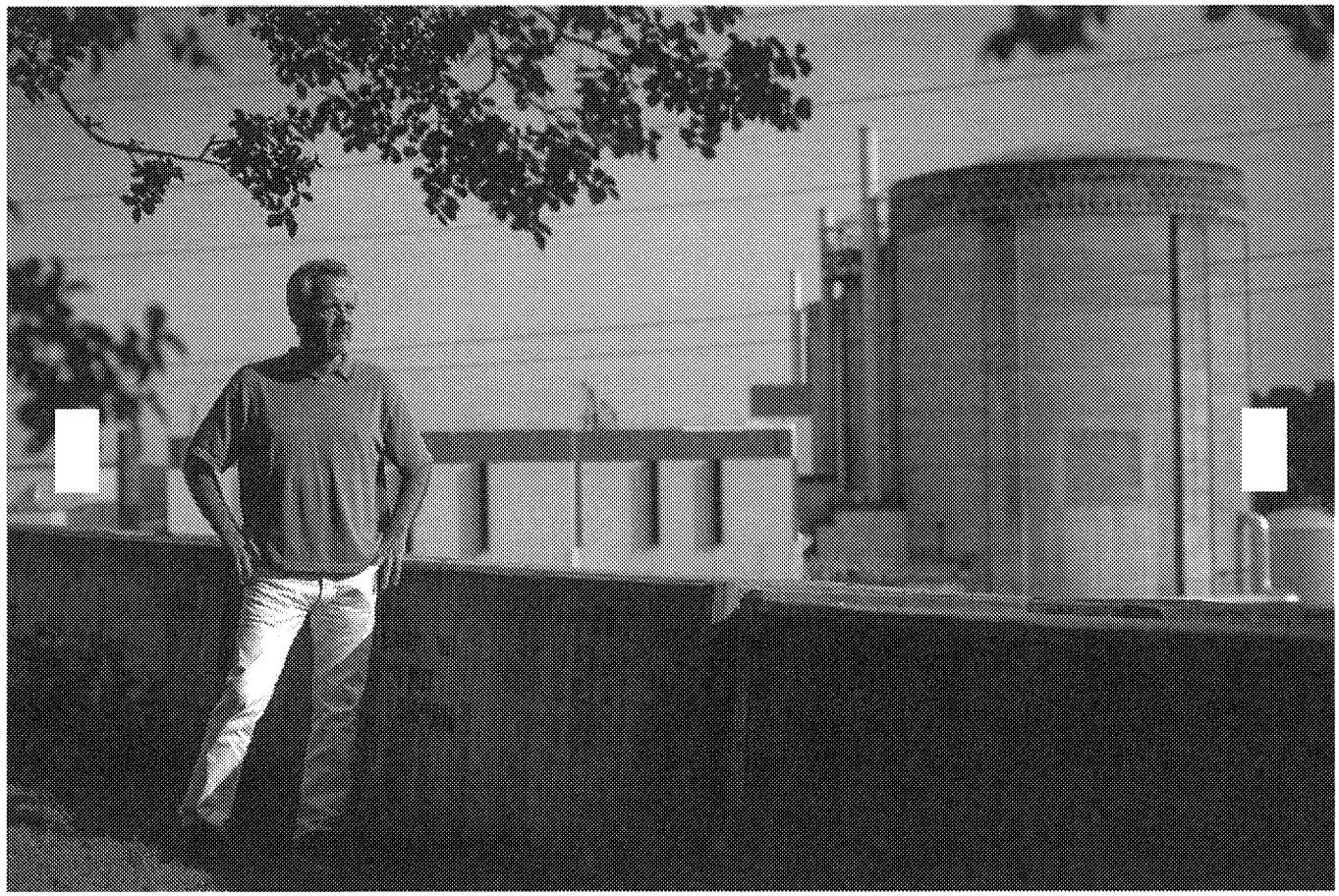


Photo: Charles Mostoller / Special To The Chronicle

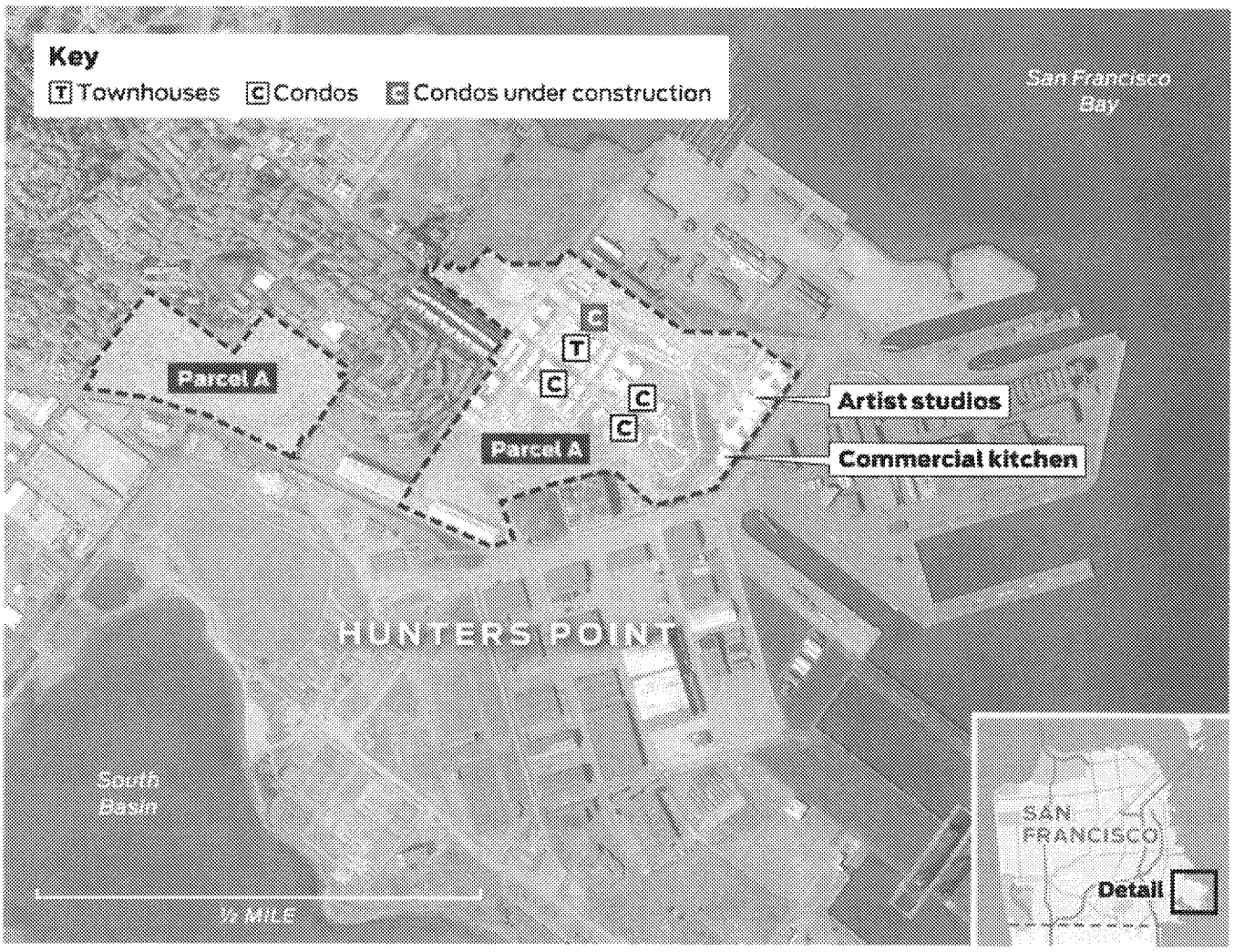
IMAGE 1 OF 2
Bert Bowers, shown at a nuclear power plant in South Carolina, is a whistle-blower in the cleanup of the former San Francisco Naval Shipyard at Hunters Point.

Bert Bowers had never seen anything like the EPA van. It pulled into the old Hunters Point Naval Shipyard in 2002, a white vehicle about the size of a U-Haul truck, with what looked like a small, air-conditioned laboratory inside, hooked up to a radiation-scanning device.

He was intrigued. Bowers, a lanky 43-year-old with a South Carolina drawl, had worked as a radiation technician and safety trainer for 25
years, mostly at nuclear power plants.

Recently he had taken a job at the San Francisco Shipyard project along the city's southeast coast — a 500-acre redevelopment site that promised homes, playgrounds and businesses for a space-constrained city with a huge housing shortage.

Development on Parcel A



Much of the site was still laced with dangerous, long-lasting, radioactive isotopes from the 1940s, when the Navy used the shipyard to perform animal experiments with radiation and to decontaminate ships exposed to atomic-bomb tests in the Pacific Ocean. Before houses and storefronts could be built there, radioactive material had to be identified and removed.

The main company in charge of the cleanup has long been Tetra Tech, a $2.8 billion federal contracting giant. At the time, Bowers worked for New World Environmental, a company that specialized in cleaning up radiological contaminants and later became an important Tetra Tech subcontractor. He'd been told the radiation "scanner van" from the Environmental Protection Agency was cutting-edge, full of supersensitive gizmos, and was excited to see it in action. "You're hoping you're really going to peel the scab back and find where some of the problems are," he recently recalled.

Bowers chatted with the EPA technician who was preparing to operate it. How effective was the van? Was it going to work?

His answer, Bowers said: "Don't get your hopes up."

The plan that day was for Bowers to follow in his own vehicle as the scanner van drove through Parcel A, a 75-acre swath of land in the shipyard where the city hoped to build thousands of new homes. If the van identified any "hot spots," Bowers would then investigate those areas on foot, with more sensitive, handheld instruments.

The entire, 935-acre shipyard site is divided into parcels labeled A through G — a jigsaw puzzle of lands and waters variously contaminated by heavy metals, asbestos, PCBs and radioactive waste. The parcel boundaries, meant to help organize the cleanup, are just lines on a map, not physical partitions. Parcel A is the farthest inland, uphill from the bay and long considered by the Navy and the EPA to be free of concerning amounts of radioactivity.

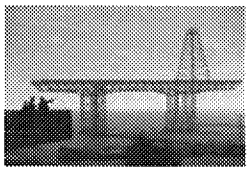
The atomic bomb attacks and tests of the 20th century spread fallout around the Earth, establishing a trace background level of radioactive isotopes like plutonium-239, cesium-137

and strontium-90. Then the Navy released more of these materials at Hunters Point in the 1940s and 1950s, along with radium-226, which was used to illuminate tool displays and deck markers at night.

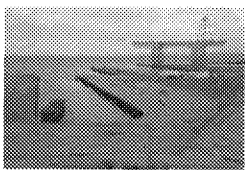
Even extremely tiny amounts of certain isotopes can harm humans, and the EPA determines the acceptable level of risk for various environmental contaminants on Superfund sites like the shipyard. The EPA's default cleanup goal for radium is two-thousandths of a picocurie, the amount of radioactivity emitted by the merest speck of radium — two-thousandths of a millionth of a millionth of a gram of material.

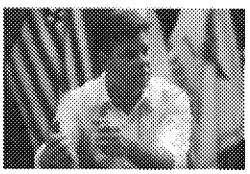
MORE ON HUNTERS POINT

2 sentenced for falsifying reports on soil samples at Hunters



SF residents sue firm over soil cleanup at Hunters Point





SF expanding pilot program that gets public housing residents on

On that day in 2002, the EPA van didn't find any hot spots on Parcel A — "no radiation above natural background levels," according to one EPA document. Based partly on the results from the scanner van, Parcel A was given a clean bill of health by federal, state and local officials.

No further searches for radioactivity were ordered there.

The Navy transferred the parcel to the city in 2004. The following year the city turned it over to a commercial developer, Lennar / FivePoint, which broke ground on new homes in 2013.

Since then, Parcel A has lurched back to life, with 300 housing units already completed and another 150 under construction. But as Parcel A became a place where people live, work, and

play, other parts of the shipyard have been engulfed by a growing scandal.

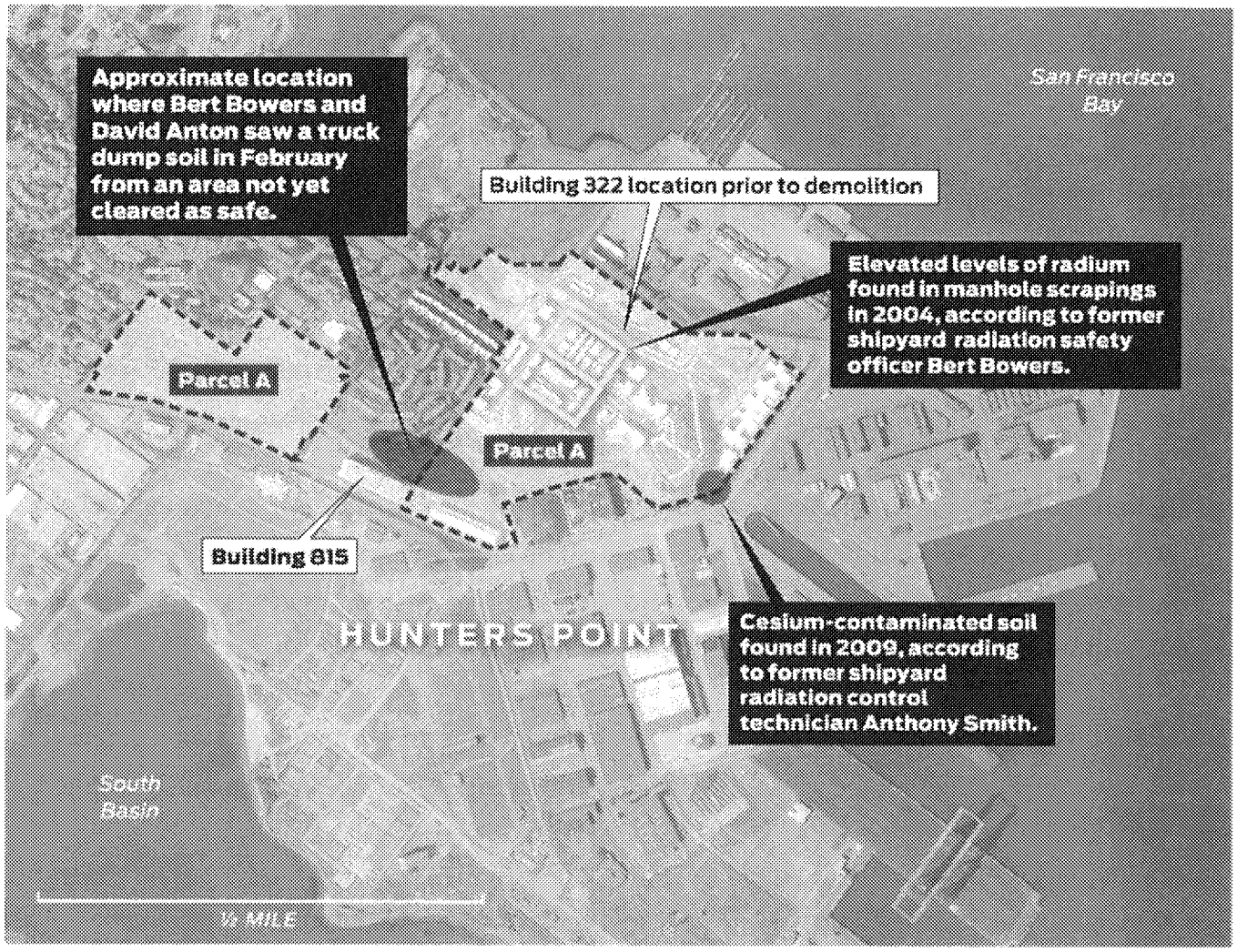
At the center of it is Tetra Tech, the Navy's favored cleanup contractor. In the last decade, several former shipyard workers, including Bowers, have complained about safety violations and outright fraud at the heart of the cleanup effort. At first they took their concerns to Tetra Tech, and in several cases, they said Tetra Tech fired or sidelined them. Then they went to regulators and journalists, accusing Tetra Tech of falsifying data and cutting corners to please the Navy, which wanted the parcels cleaned up as fast as possible.

Now, years later, the government seems to be paying attention.

On Thursday, the U.S. Justice Department announced that two former Tetra Tech supervisors, Justin Hubbard and Stephen Rolfe, had each pleaded guilty to falsifying records in connection with the cleanup, swapping suspect soil with clean dirt to make it appear that areas were free of harmful radiation. Both were sentenced to eight months in prison. Reports released last year by the Navy and the EPA said that up to 97 percent of the soil samples taken in two areas of the shipyard site could not be trusted.

Tetra Tech has maintained that the Navy and regulators call the shots and set the cleanup criteria, not the company. "We stand by our work," according to a spokeswoman. Still, Tetra Tech has agreed to pay for retesting. Tetra Tech is no longer working at Hunters Point, having been "demobilized upon completion of the on-site work," said the spokeswoman, who did not respond to follow-up questions.

Alleged trouble spots



Satellite image: Google Earth The Chronicle

So far, Parcel A has escaped this new wave of scrutiny. Many of the government offices long responsible for watching over the Navy's shoulder as the cleanup project unfolds — including the EPA, the Nuclear Regulatory Commission, CalEPA and the city's Office of Community Development and Infrastructure — have repeatedly assured the public that Parcel A has been extensively checked and poses no danger.

"For those already living on the Shipyard," Rep. Nancy Pelosi said in a statement on April 25, "it is important to remember that the Navy and EPA have confirmed that people who live on, work at and visit the Hunters Point area are safe."

But according to Bowers and other former radiation workers at the shipyard, Parcel A has never been adequately checked for radioactive contaminants. The EPA scanner van looked at only a fraction of Parcel A, and was incapable of identifying certain types of radiation known to be present at the shipyard, according to one of the whistle-blowers and an independent expert familiar with the van and its capabilities.

That's not all. Bowers and another whistle-blower, Anthony Smith, said they later found "hot" samples of radioactive material at locations that were either inside Parcel A or adjacent to it, within a stone's throw of condos and businesses. Bowers and Smith say that Tetra Tech ignored or covered up those readings.

In response to questions about Parcel A, Lennar Corp., the former parent of San Francisco Shipyard developer FivePoint, said: "We have relied on environmental regulators who have repeatedly assured us that Parcel A is clean and safe. We take this matter very seriously and are looking into it further with the relevant government agencies."

FivePoint executive Kofi Bonner added that the company's partnership with the city "begins with the understanding that the Shipyard parcels are thoroughly tested" and "properly cleaned."

The city directed inquiries about Parcel A to officials with the Navy and the EPA. The Navy did not respond to specific questions and instead sent links to web pages with histories and documents about Parcel A. "Its safety has been verified repeatedly and consistently over decades by state and federal regulators," one of the Navy pages reads in part. A sub-headline says, "No Health Concerns for Parcel A Residents."

An EPA spokeswoman echoed the Navy, sending an answer that included verbatim quotes from a 2-year-old EPA fact sheet: "Historically, the majority of Parcel A was used for residences and administrative offices, not industrial activities. The only radiological materials found at Parcel A were sandblast grit and firebricks; these have since been removed." The spokesperson said that Tetra Tech performed only limited cleanup on Parcel A, and the EPA had no reason to question that work "based on the information we have at this time."

In fact, everyone agrees that Tetra Tech did minimal radiological work on Parcel A. The EPA and Navy had determined the land was clean, so never ordered a full soil sampling.

And that's the problem, according to whistle-blowers and experts who say there is no way to know exactly what is in the ground at Parcel A. The land was never rigorously inspected for

radiation. Navy and EPA analyses of Parcel A are based on incomplete historical records and decades-old surveys. And for several overlapping reasons — fraud by Tetra Tech, government oversight failings, disruptions caused by recent construction, and the sheer passage of time — there's cause to question whether contaminated materials have been churned up on Parcel A or have migrated there from other parts of the shipyard.

The upshot: Parcel A may be free of radioactivity above harmful levels. Or it may not.

We simply don't know, says Don Wadsworth, president of New World Environmental, the former radiation-control subcontractor for Tetra Tech. Around 2007, Wadsworth voiced concerns to Tetra Tech about the integrity of the cleanup, and said Tetra Tech began to phase him out; New World's last year on the project was 2009. Wadsworth and Bowers have agreed to appear at a Board of Supervisors hearing on May 14, where they plan to argue that the entire site needs to be retested for radiation — including Parcel A.

"The people who certified that the other parcels were clean were caught falsifying their data," Wadsworth said. "If you found out that all the studs in the house that the contractor made for you were made out of bread sticks, you'd have to question the whole foundation up. And that's what you have to do here. You have to question everything they did."

In recent months, residents of Parcel A have started to wonder about the ground beneath their feet. Linda Parker Pennington, who moved into a three-bedroom town house with her family in June 2015, said she had felt reassured by the promises of the developer and the Navy. But now, she said, she worries about her teenage son and the other neighborhood children who play in the grass and dirt on the parcel and may wander beyond its borders.

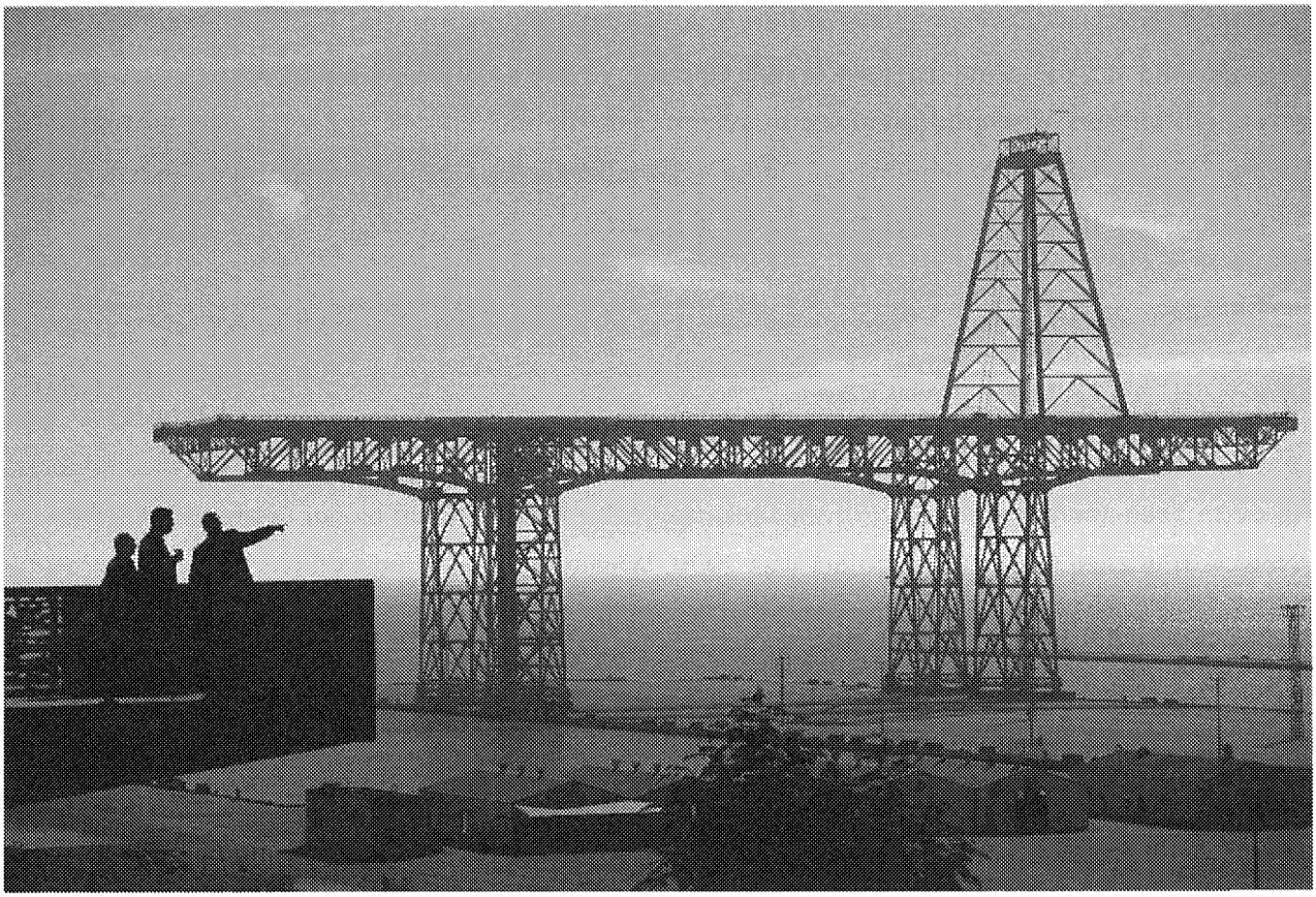


Photo: Noah Berger / Special To The Chronicle

A group takes a January tour of the former Hunters Point Naval Shipyard, where the San Francisco Shipyard development is under construction after the Superfund site was cleaned up.

If the Navy never really went looking for radioactivity on Parcel A, and if two Tetra Tech supervisors lied about what they were doing on other parts, how can officials be certain that residents in Parcel A haven't been exposed to harmful radiation?

"Most children like to venture," Pennington said. "The parcels are an artificial construct that make it sound like there are barriers between them, but really there are not."

"If I was living there," Bowers said, "yes, I would be worried."

Radioactive materials have to be strictly controlled. If not, they travel, imperceptible to humans. The minuscule particles get picked up by shoes and boots and rivulets of rainwater. Stirred into a cloud of dust, the breeze carries them. Nature has its way — wind, storm, earthquake, soil erosion, fire—and moves radioactive material from one place to another.

Humans can easily ingest radioactive particles, spread from dirty hands to lips with the bite of a sandwich or a drag from a cigarette.

"Radiation is essentially subatomic bullets," said Daniel Hirsch, retired director of the Environmental and Nuclear Policy Program at UC Santa Cruz. If the bullets damage genetic material in a cell, a cancerous tumor can grow.

There were multiple sources of radiation at Hunters Point in its heyday, the 1940s and 1950s. Ships that returned from atomic bomb tests in the South Pacific, dosed with fallout, were decontaminated in the Hunters Point dry docks, a process that included sandblasting the radioactive exteriors of the ship. (The largest dry dock, No. 4., long defunct, almost nips the eastern edge of what is now Parcel A.) Another source was the Naval Radiological Defense Laboratory, a cluster of buildings where government scientists blasted animals with radiation and fed them isotopes to learn about the possible effects on humans. At night, the shipyard glowed with radioactive paint.

Much of what the public knows about this contamination is documented in a 665-page report called a Historical Radiological Assessment, produced by New World and the Navy and finalized in 2004. They researched old Navy records, spoke with former workers at the site, and conducted soil surveys and new searches for radiation.

The assessment depicts the old shipyard as a chaotic, messy, dangerous workplace with lax safety standards. According to one former worker who was interviewed for the assessment, the radioactive carcasses of large mammals were sometimes cut up with axes, the parts stuffed into 55-gallon drums for burial at sea or in the landfill. One lab building next to Parcel A contained a room full of caged dogs given lethal doses of radiation, the report says. The dogs bled and defecated in their cages, clogging the drains with radioactive excrement until the floor was covered in 6 inches of water.

As workers decontaminated the ships, the assessment says, they sandblasted the surfaces with coal grit to remove the toxic paint.

"The grit would blow toward the bay," one worker reported, "but, occasionally, the wind would blow it back over the base. Blasting would not stop because the wind changed direction."

In that direction lay Parcel A and the Bayview-Hunters Point neighborhood — a community of predominantly African American residents. Many residents worked at the shipyard or are the

children of those workers. For decades, they have blamed the site for elevated rates of cancer and other health problems.

Last week, a lawyer representing Bayview-Hunters Point residents filed a class-action lawsuit against Tetra Tech for harm suffered as a result of the botched cleanup. Tetra Tech has called the suit "factually incorrect and meritless," saying that the company "stands by its work at Hunters Point."

"It is a source of fear and chronic terror," said Dr. Ahimsa Porter Sumchai, a longtime environmental activist who grew up in the Southeast section of the city. "What is so unrelenting about it is the way this project just keeps going forward like a bulldozer, no matter what."

When cleanup contractors went hunting through Navy archives in the early 2000s, they found evidence of past radioactive contamination in 90 buildings. Of these, a few were on the area designated Parcel A.

One was Building 816, a concrete lab containing a high-voltage accelerator; tritium, a radioactive form of hydrogen, was stuck to the walls. Navy records said that the building was subsequently decontaminated and three additional checks for tritium contamination found none. Another problem spot was Building 322, a former guard office that had been moved to Parcel A from another part of the shipyard in 1959. A New World investigation of the building in 2002 turned up readings of cesium-137 and europium-152 at "slightly" elevated levels.

New World sent Bowers in. He saw that the floor of Building 322 was covered with four or five layers of tiles — which indicated to him that chemical spills had probably been covered up. With no way to peel off the tiles or test them, the Navy decided to have Bowers remove the entire floor and foundation. He bagged up the pieces for disposal in a special landfill that handles radioactive and asbestos waste. The rest of the building was demolished in 2004 by Tetra Tech.

Aside from surveying and these buildings, New World and Tetra Tech performed no other official radiological investigations on Parcel A, according to Wadsworth and Bowers. The most toxic stuff was thought to be on the other parcels, and that's where technicians went looking.

They focused on Parcel F, the water off the shoreline, where Wadsworth went diving to take samples of underwater sediment and discovered pockets of elevated radium-226. They scoured Parcel E, home of a 22-acre landfill that caught fire in 2000, and found cesium-137 in the drain

lines. Bowers remembers seeing radium-painted deck markers "just scattered all over the grassy slopes on the way to the bay." Bits of disintegrated radium dials — highly radioactive metal specks — lay in piles of seashells.

After a while, getting all these hits in the areas surrounding Parcel A, Don Wadsworth started feeling funny about ignoring that portion of the site. He thought the Navy should approve a thorough radiological probe of Parcel A, with handheld radiation detectors, and said he asked the Navy for permission around 2003.

"It made sense," Wadsworth recalled. "We're finding all this stuff at the foot of the hill. We should go up the hill." The Navy, he said, disagreed and said no. "Their position was it had already been scanned and said good to go by the EPA." The Navy did not comment when asked for a response.

The scan the Navy referred to was the one done by the scanner van the EPA had brought to Hunters Point the year before, and the EPA's 40-page report on the van's findings — a crucial piece of the narrative about Parcel A that would be presented to the public in years to come.

The EPA made mixed claims about the van's capabilities and performance, sometimes admitting its limitations, other times emphasizing that the van's negative readings should give people great confidence. "It offers an otherwise unobtainable sense of security that nothing has been overlooked," the agency wrote in 2002. Later, the EPA would claim in an official document, "EPA scanned the entire surface of the parcel."

The EPA's conclusion would influence the process around Parcel A, giving comfort to stakeholders and helping to justify its transfer to the city. For instance, in a 2004 white paper, an environmental expert hired by the city would emphasize the van's negative readings: "Based on the scanner van surveys," he would write, "I conclude that no residual contamination from HPS (Hunters Point Shipyard) operations is indicated within the surveyed areas of Parcel A."

But Bowers had seen first-hand that the vehicle's abilities were limited. More ice-cream truck than off-road vehicle, the van was able to reach only locations that had decent roads, which amounted to a small percentage of Parcel A. As he followed the van in his own vehicle, he saw it struggle to navigate constant obstacles — fences, locked gates, rocky, unpaved terrain and roads disrupted by potholes and weeds.

The instruments in the van never sensed any problem areas. "Not one place was pointed out," Bowers recalled. "Not one flag was hit."

On other days, when Bowers wasn't following the van, it drove across other areas of the site, including locations where technicians later discovered very high levels of radioactivity. But the EPA van didn't spy any trouble spots on the other parcels, either, EPA records say.

Wadsworth, Bowers and other experts think they know why: The van was at least half-blind. Originally built in 1980 to scan for radioactive waste in uranium mines and since adapted for soil screening, it was tuned to detect gamma rays, which made it a crude tool for Hunters Point, according to Wadsworth. Plutonium-239, one of the deadliest isotopes at the shipyard site, which has a half-life of 24,000 years, mostly emits alpha particles; strontium-90, which mimics calcium and builds up in bones when ingested, emits beta radiation. The van wasn't designed to notice those isotopes.

"The scanning of Parcel A with that van would be ineffective," Wadsworth said.

After reviewing the EPA's scanner van report, Hirsch, the nuclear expert, agreed. He said such scanner vans are supposed to be used only as a gross screening tool to help focus subsequent soil sampling, which is done by taking thousands of samples in the field and then sending the dirt to be tested in a laboratory.

"The scanner van was incapable of seeing most radioactivity at levels of health concern," Hirsch said. "The van simply can't be used to declare the site safe."

In response to questions about the scanner van, an EPA spokeswoman said the van offers only a "first look" at possible contamination "and is often used to prioritize more soil sampling for further radioanalyses."

"The results of the scanner van are one line of evidence that EPA relied on in investigating questions brought up regarding Parcel A," she said. "But it is not the only source of information."

After the EPA van visited Parcel A and pronounced it clear of worrisome radiation, the Navy never scanned the parcel again. However, two former Tetra Tech employees say they later discovered elevated radiation levels in Parcel A by accident.

Bowers said that around February 2004 he took a hot sample on Parcel A. He was starting to investigate some of the manholes at Hunters Point, where radioactive materials might have been flushed. He wanted to get a "clean background," an uncontaminated sample he could compare others against. So he went down manholes on Parcel A where he assumed there was no dangerous radiation, and took scrapings of soil that he sent to the lab.

"We weren't expecting to see anything," Bowers said.

But when the reports came back from Tetra Tech's on-site lab operated by New World, according to Bowers, they showed that the soil samples from the Parcel A manholes contained "seriously" elevated levels of radium. The reports, he said, also listed high uncertainty levels for the radium numbers, signaling doubt about the results.

Bowers said Tetra Tech then sent the reports to the Navy. After that, he never heard anything back. "They obviously dismissed it," he says. No additional tests for radium on Parcel A were ordered. Neither Tetra Tech nor the Navy responded when asked for comment.

Last year, a former radiation technician named Anthony Smith gave a sworn declaration about his experiences at Hunters Point. The declaration is part of a petition asking the Nuclear Regulatory Commission to pull Tetra Tech's license to handle radioactive materials.

In his testimony, Smith described a soil sample he took in 2009 from Parcel A. His supervisor, Justin Hubbard — one of the two Tetra Tech managers who has pleaded guilty to falsifying soil samples — told Smith that in preparation for some remediation work on sewer lines, a clean background sample was needed. Smith walked to a waist-high fence near the intersection of Fisher Avenue and Spear Street, along the eastern edge of Parcel A, where it borders a thin strip of land designated as "UC-2," or Utility Corridor 2.

With a hand trowel, Smith said, he dug a hole in the ground about 6 inches deep. The hole was either inside Parcel A or a few feet beyond it, in UC-2. Smith says variously in his declaration that he was "near" Parcel A, "in" Parcel A, and "along the border"; from the spot he had chosen, he could look up the hill to the spot where condos would be built on Parcel A.

Smith scooped some dirt from the bottom of the hole into a plastic sample jar. He then gave the jar of dirt to Hubbard, and Hubbard took it to the lab, he testified. The next morning, Hubbard told Smith and others that the soil sample had come back "hot," showing radioactive cesium-137

at a level of 2 to 3 picocuries — an amount of radiation about 18 to 26 times higher than what the Navy deemed acceptable.

It was an important find, Wadsworth said in discussing Smith's declaration: "You're 20 times above background with that one sample. That's significant enough to cause more surveys. Because you want to find out where that came from."

Instead of doing surveys, though, Hubbard told Smith and other workers to "get rid of it and not say a word," according to Smith's declaration. (Reached on the phone recently, Hubbard told a Chronicle reporter, "Go f— youself," and hung up.)

A Tetra Tech representative challenged Smith's credibility, saying that he has given contradictory accounts: "Mr. Smith claimed in one news report that the background sample he allegedly took was from an area adjacent to Parcel A. He now claims he took the sample directly from Parcel A."

David Anton, an attorney who represents Smith and six other Hunters Point whistle-blowers, responded that Smith "pointed the exact spot out" to a group of about 15 federal officials on a tour of the site in June 2016, when Smith told his story to representatives of the U.S. attorneys' office, the EPA, the NRC and the Navy.

Tetra Tech also argues that Smith worked for New World and other subcontractors, not for Tetra Tech directly. According to Anton, Smith reported to Tetra Tech supervisors who had the power to fire him. The Chronicle was unable to reach Smith.

EPA officials said they took Smith's claim seriously. They said they removed soil in the corridor next to Parcel A down to a depth of 2 feet. They then replaced the dirt with new, clean soil from outside the shipyard. But a one-page description of this work that the EPA provided to The Chronicle makes no mention of Smith's cesium discovery, potential radioactive contaminants on Parcel A, or radiation testing.

An EPA spokeswoman did not immediately respond to questions about whether the agency tested that soil for radiation before removing it, or performed other tests of soil in the vicinity.

Parcel A is now changing by the day. Humans are transforming it in ways large and small. People have moved into condos and walk their dogs on grassy expanses that overlook the bay.

The location where Smith took the sample is now an active construction area, according to Anton. The attorney said he watched during a recent visit as workers dug in the dirt, standing in holes they had carved in the earth.

Mere yards away, a commercial kitchen pumps out food for people beyond the Shipyard, a fact that Wadsworth finds alarming if Parcel A remains radioactive.

"Building a kitchen in an area where you've got contamination — how much explanation do I have to put into that?" Wadsworth said. "It just goes against the principles of radiation protection. It just does. And common sense."

The solution, Wadsworth and Bowers agree, is to finally perform a proper radiological investigation of not just Parcel A, but the entire site.

"Go back and make it right," Bowers said. "Do it the correct way this time."

And do it now, Wadsworth says, because the construction workers on Parcel A have no special clothing or gear to protect against potential radiation. If contaminants are there, workers are likely to be exposed. "Anything that gets on your hands will get around your mouth. Guys, construction workers, they will smoke, they will eat, they will also take their dirty clothes home, by their spouse, themselves, their children."

One day in February, Anton and Bowers said, they were walking near Hunters Point with Smith, looking down at the shoreline, when they noticed a dump truck.

They couldn't tell which company the truck belonged to. It seemed to be near the border of Parcel E and Parcel F, two pieces of the site that haven't yet been cleared and where large amounts of radioactive waste have been discovered in the past.

Bowers and Anton said they watched as the truck scooped wet slush from the area, then carried the mud inland toward the hillside near the newly developed condos on Parcel A.

The truck stopped just above Navy Building 815, formerly a radiological laboratory that contained animal quarters and may have been the same kennel where dogs once lay dying. There the truck dumped its load, slush and concrete tumbling to the ground. The hill was now a little taller.

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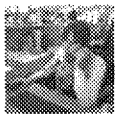

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